

NEWSLINE

Published weekly for employees of Lawrence Livermore National Laboratory

Friday, February 22, 2002

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Marburger outlines science priorities

By Sheri Byrd

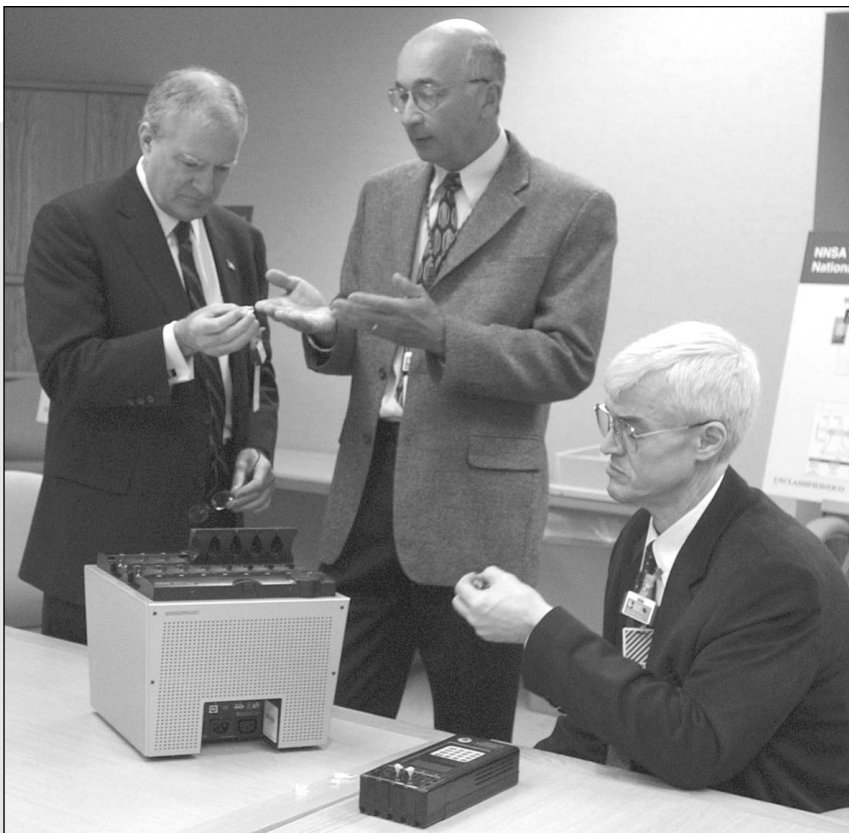
NEWSLINE STAFF WRITER

Lab management and employees were given an inside look at the Bush administration's top science policies from John H. Marburger III, science adviser to the president and director of the Office of Science and Technology Policy.

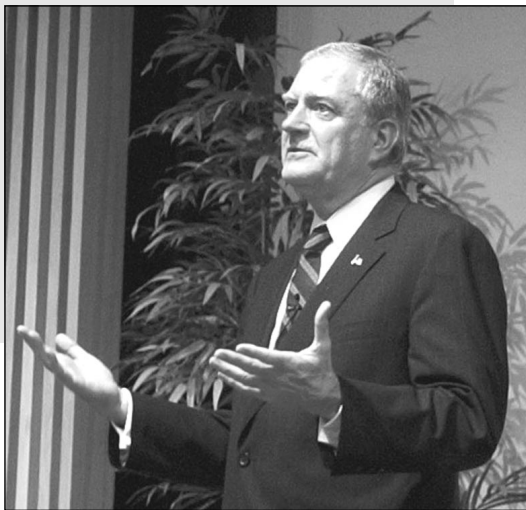
Marburger spoke before a large crowd in the Bldg. 123 auditorium, specifically addressing "concerns about the impact of Sept. 11 on science."

Marburger, an LLNL laser consultant in the 1970s, spent some time touring NIF, and then spoke on the evolving mission of the national labs, saying, "science funding and research will be relatively unaffected. The war against terrorism will probably not bring a vast increase in funding or a major change in mission for the national labs."

See **MARBURGER**, page 8



John Marburger, science adviser to the president (left and below), gets an overview of the Lab's counterterrorism technologies during a visit to the Lab. Fred Milanovich (center) of NAI explained the Lab's work to Marburger and Penrose Albright, assistant director of the Office of Science and Technology.



JULIE KORHUMMEL/NEWSLINE

Lab to add 9/80 workweek, convenience services as result of employee survey

NEWSLINE STAFF REPORT

Convenience services such as dry cleaning and mail and package delivery, the construction of sport courts near the Lab pool and adding the 9/80 workweek to the package of flexible schedule options are a few of the changes that will be made in the next few months. The changes are the result of the employee survey, "Assessing the Workplace."

Longer-term suggestions include modifying the performance management system and increasing investment in employee development.

These recommendations, as proposed in the employee survey, were unveiled Thursday in a special meeting for managers and supervisors. Director Bruce Tarter, Deputy Director Jeff Wadsworth and AD Jan Tulk outlined a number of conclusions — some that can be addressed within a matter of months, while others will require at least one year.

A general session for interested employees to discuss the survey recommendations will be held at noon Wednesday, Feb. 27, in the Bldg. 123 auditorium. All employees are invited; Tulk and Wadsworth will also take questions.

During Thursday's rollout, Tarter stressed the unanimous approval of the recommendations by senior managers. While the recommendations are institutional in nature, Tarter noted that each directorate will be allowed to come up with implementation guidelines that best fit the needs of its specific program.

Tulk and Wadsworth stressed the Lab's commitment to change following the survey's 70 percent response rate and written comments that numbered more than 7,000.

That input boiled down to suggestions in seven key areas:

- Maintaining a competitive Total Rewards Program, including expanded use of non-base pay and an increase in the awards and recognition program.
- Modifying the performance management system by implementing best practices identified in other R&D organizations.

See **SURVEY**, page 7

Lab reaches another milestone in U.S. effort to counter chemical weapons

By Stephen Wampler

NEWSLINE STAFF WRITER

Lab researchers have passed another important step in their bid to have the Laboratory designated as the second U.S. facility for conducting tests under the Chemical Weapons Convention treaty.

The Laboratory received word earlier this month that it was awarded an "A" grade for its identification of three "blind" chemical samples by the Organization for the Prohibition of Chemical Weapons, or OPCW.

Located in The Hague, Netherlands, the OPCW is responsible for implementing the Chemical Weapons Convention treaty, which has been ratified by more

than 135 nations, including the United States

Under this treaty, the development, production, acquisition, stockpiling and use of chemical weapons has been outlawed, as well as the transfer of chemical-weapon-related technologies.

"This Lab success is good for the country and the Laboratory because it enables the United States to move toward fulfilling one of the conditions of the Senate (for testing in the United States), said Jeff Richardson, the Lab's OPCW project manager.

"This is one of the many ways in which the Laboratory is working to counter the proliferation and use of chemical weapons," Richardson added.

Under a condition set by the Senate, all samples

taken by OPCW inspectors at U.S. chemical plants must be tested in the United States.

Presently, there is one U.S. laboratory — the Edgewood Chemical and Biological Forensic Analytical Center in Maryland — that has been certified by the OPCW for testing. LLNL would be the second laboratory.

In its last test, held in November, the Lab's Forensic Science Center and Chemistry & Materials Science directorate were asked to identify one organic sample and two decontamination samples.

The Livermore researchers were given two weeks

See **OPCW**, page 7



1959: Lawrence awards debut

— Page 3



Blue chip effort earns top honor

— Page 5



Terrorism technology center stage at NTS

— Page 8



LAB COMMUNITY NEWS

Weekly Calendar

Technical Meeting Calendar, page 4

Monday
25

Postdoc fellowship candidate Diego Fernando Torres of Princeton University, will present, **"A Trip to the Unknown: Unidentified Gamma-ray Sources,"** at 10 a.m. in Bldg. 219, room 163. As part of the interview process for University Relations 'Postdoc Fellowship Program, each candidate is required to present a talk in his or her field.

Wednesday
27

The Eldercare Support Group, sponsored by Health Services, will present **"How to Help Your Parents Protect Their Assets During a Nursing Home Stay,"** by certified senior adviser Kit Batina, from noon to 1 p.m. at the Visitor Center Auditorium (Trailer 6525). Family members of Lab employees and contract workers are welcome to attend. Badges are not required and reservations are not needed. Seating is limited to the first 25-30 people. Contact: Marnette Yeager, 2-1217.

Thursday
28

A **"Palm Management and Productivity"** class is scheduled from 8 a.m.-4:30 p.m. in the Bldg. 543 auditorium. Learn how to use the Palm and every program that comes on it. Call or e-mail SND Training Center, 3-2736 or <mailto:snd-training@llnl.gov>. Cost is \$100-\$225 depending on enrollment.

Friday
1

For those who are already proficient in the basic operation of their Palm, an **Advanced Palm Solutions class** Friday, March 1 is available in the Bldg. 543 auditorium. The course will cover HotSyncing, time management, getting Word and Excel on your Palm, finding and using after-market Palm programs and project management software. Contact: SND Training Center, 3-2736.



B Division's **spring book sale** will return March 11-15, 11:30 a.m.-1:30 p.m., in Bldg. 132, room 1200 (Q- or L-cleared access only). Used books, videos, CDs and books-on-tape are needed; all proceeds are used to buy Christmas gifts for needy children. Each year the sales help agencies in various places, including Livermore, Fremont, Concord and San Joaquin County.



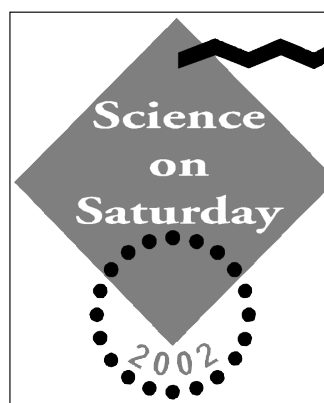
Broadcast Schedule Lab TV

The DDLS talk by John Marburger, director of the Office of Science and Technology Policy and adviser to the president, **"Science and Technology Policy for the National Laboratories,"** will be broadcast on Lab Channel 2 Thursday, Feb. 28, at 10 a.m., noon, 2, 4, and 8 p.m., and on Friday, March 1 at 4 a.m.

Hazards of nearby volcanoes unearthed

Volcanoes in California? Laboratory research engineer Alan Meyer will provide a map of California's volcanoes and address the hazards associated with each in his talk, **"Volcanology — Volcanoes in Your Backyard,"** on Saturday, Feb. 23, at 9:30 a.m. in the Lab's Bldg. 123 auditorium.

Meyer, who first became intrigued by volcanoes at the age of 10, describes California as a "volcanic wonderland" and will share examples of nearly every volcanic feature found on the earth. He and his co-presenter, Monte Vista High School science teacher Stan Hitomi, will explain how to identify different volcanic features and where to find specific examples within a short drive of Livermore.



LLNL's Science on Saturday program is a five-week series of free 90-minute talks geared toward middle and senior high school students. The free lectures will be offered through March 2, from 9:30-11:15 a.m. All of the talks are in the Bldg. 123 auditorium and are open to students, their parents or guardians, and teachers.

Registration is at the door and seating is available on a first-come, first-served basis, with priority given to students.

For more information, check the Website at <http://education.llnl.gov/sos> or e-mail the Lab's Science and Technology Education Program at education@llnl.gov.

Versatility of accelerator mass spectrometry extolled

John Knezovich, Director of the Lab's Center for Accelerator Mass Spectrometry (CAMS), the most versatile and productive facility of its kind in the world, will present **"From Dating Ancient Artifacts to Revolutionizing Biological Science Measurements,"** at 7 p.m. on Thursday, February 28 at Livermore High School, 600 Maple St., Livermore. The free community lecture is the fifth in the popular Science 2002 Lecture Series sponsored by the Laboratory's Public Affairs Office.

Knezovich will discuss advances in several scientific disciplines that have been made possible by accelerator mass spectrometry (AMS), an exceptionally sensitive technique for measuring concentrations of specific isotopes in relatively small samples.

For more information on this or upcoming lectures in the series contact Kirsten Sprott of Public Affairs, at 4-4822 or visit the web at www.llnl.gov/llnl/06news/community/lecture.html.

IN MEMORIAM

Charles Frederick Miller

Charles Frederick Miller passed away in his sleep at home in Livermore, after a battle with lung cancer. His family was with him when he died. He was 69.

"Chuck" Miller was born in Omaha, Nebraska, on November 8, 1932. A self described "army brat," he lived in Germany after World War II.

Miller attended college in Compton, Calif. There he met Sally Simon, a high school student at nearby Lynwood High School. The two were married on June 3, 1953, and a year later moved to Europe where Chuck was a sergeant in the U.S. Army and where their first son, David, was born.

Miller was awarded an MBA from UCLA in 1960. While there, second son Douglas was born. The family also moved to northern California.

Miller retired in 1990 after working at Lawrence Berkeley and LLNL. He was a manager in Physics, Mechanical Engineering, and Technology Transfer.

His sense of humor and joy of life are just two of his many qualities that will be missed by his many friends and family.

He is survived by his high school sweetheart and wife of 48 years, Sally; sons David and Douglas Miller; daughters-in-law Sandra and Julie; grandchildren Kai, Ryo, and Tula; sister Adrienne Mastro; sister-in-law Sue Grissom, and many loving relatives and friends.

A memorial service celebrating Miller's life will be held on Tuesday, Feb. 26 at 11 a.m. at Callaghan's Mortuary, 3833 East Avenue, Livermore.

Memorial donations may be made to the American Cancer Society, 7000 Village Parkway, Dublin, CA 94568, or Hope Hospice, 6500 Dublin Blvd, Suite 100, Dublin, CA 94568.

Peter M. Holl

The family and friends of Pete Holl wish to remember the long-time Lab employee on the first anniversary of his passing. Holl suffered a stroke at John Muir Hospital in Walnut Creek while recovering from gall bladder surgery. He died two months later, on Feb. 22, 2001 at his home in Richland, Wash.

His daughter and son-in-law, Annie and Bill Stokes, were by his side.

Holl graduated from the University of Wisconsin in 1946 with a bachelor's degree in mechanical engineering.

Following initial positions with the Green Bay Drop Forge Company and Proctor and Gamble, Holl worked in the Jet Engine Division of General Electric from 1948, until his LLNL employment in 1964.

Holl's initial assignment was the Underground Nuclear Test Program. Projects included vacuum systems and laser amplifiers. He also received special recognition for his work in high-speed valves. In 1977, he transitioned to the magnetic fusion energy program. Holl retired in 1986. During his career he received three patents, and first and second place Lincoln Arc Weld Foundation National Design Awards.

Holl was an avid outdoorsman, with a love for hunting, fishing and primitive camping. He was active in Scouts for many years, passing on his outdoor enthusiasm and knowledge. His life was characterized by a love for living, a head-on approach to hardship, and enjoyment of seizing opportunities as they came.

Holl was born in Green Bay, Wisc. He was preceded in death by his first wife Genevieve, and son Thomas and is survived by his second wife, Ruth, three daughters, two sons, eight grandchildren and three great-grandchildren.

Holl's quick wit and warm smile is greatly missed by his family and many friends, but his love and warm heart will always be in their thoughts.

Newsline

Newsline is published weekly by the Internal Communications Department, Public Affairs Office, Lawrence Livermore National Laboratory (LLNL), for Laboratory employees and retirees.

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1952 – 2002

MAKING HISTORY, MAKING A DIFFERENCE

Exceptional contributions to nuclear energy

This is an ongoing feature highlighting the Lab’s 50-year history. This week we take a look at the year 1959.

Established in November 1959 by President Eisenhower and John A. McCone, chairman of the Atomic Energy Commission, the Ernest Orlando Lawrence Memorial Award is presented each year to scientists and engineers for their exceptional contributions to the development, use, or control of nuclear energy. Nuclear energy is broadly defined to include the science and technology of nuclear, atomic, molecular and particle interactions and their effects. Researchers at Livermore have won 22 of the more than 200 awards presented to date. Today, the award consists of a medal and a \$25,000 prize.

Laboratory recipients of the E.O. Lawrence Award include: Charles R. Alcock (1996), E. Michael Campbell (1994), John D. Lindl (1994), Richard J. Fortner (1991), Wayne J. Shotts (1990), Joe W. Gray (1986), Thomas A. Weaver (1985), Peter L. Hagelstein (1984), Robert B. Laughlin (1984), George B. Zimmerman (1983), George F. Chapline (1982), Lowell L. Wood (1981), B. Grant Logan (1980), John L. Emmett (1977), William A. Lokke (1975), Charles A. McDonald (1974), Seymour Sack (1973), Thomas E. Wainwright (1973), Michael M. May (1970), John H. Nuckolls (1969), Herbert F. York (1962), and John S. Foster, Jr. (1960).

LAWRENCE

1959 awards



The E.O. Lawrence Award medal and a \$25,000 prize is awarded each year to scientists and engineers for their exceptional contributions to the development, use or control of nuclear energy.

Around the world

- Castro victorious in Cuba
- Saint Lawrence Seaway opened
- First USSR ICBMs deployed
- Louis Leakey finds a skull in Tanzania, suggesting that human evolution began in Africa, not Asia
- Uprising against Chinese rule in Tibet repressed; Dalai Lama flees to India

Around the nation

- Alaska becomes the 49th U.S. state, followed by Hawaii, the 50th

- Rock musician Buddy Holly dies in a plane crash
- Barbie (the doll) debuts
- The microchip is invented
- Frank Lloyd Wright dies at age 89

Around the Lab

- Edward Teller is Lab’s director
- Lab population grows to about 3,500
- Plowshare Project underway

in other

NEWS

Significant events around the world, the nation and at the Lab.

See the Timeline: <http://www.llnl.gov/timeline/> See anniversary stories: http://www-r.llnl.gov/50th_anniversary/history.htm

Deadline extended: March 1

Send Us Your ‘Lab Life’ Story

Stories are pouring in for the “50 Years of Stories” publication, in honor of the Lab’s 50th anniversary. After looking at the stories received and after interviewing many people, we’re discovering that there are some patterns emerging. We’d like to hear more stories about:

1. Meeting your significant other at the Lab.
2. Family stories. Growing up in a Lab family, for instance.
3. Practical jokes
4. Ingenuity on the job
5. “Cooler” stories
6. Work partnerships formed with extraordinary people
7. Work travel stories (other than NTS & and Pacific testing)
8. Strange discoveries.
9. Superhuman efforts to get the job done.

Send your stories to Laurie Powers, L-664, powers12@llnl.gov, (925) 423-9868
You may also submit stories on the Web at http://www.llnl.gov/50th_anniv/story.htm.

Your turn to sound off on ‘Lab speak’

In honor of the Lab’s 50th anniversary, we’re collecting a list of phrases and other ‘Labspeak’ you’ll only find within the confines of the gates. They can be phrases that are funny, odd, or simply make sense to no one — and yet you find yourself using them every day.

Your name (optional): _____ Your ext. _____

“Lab speak” nomination: _____

Comments (optional): _____

Return form to:
Newsline
Attn: Lynda Seaver,
L-797

Lawrence Livermore
National Laboratory

Making History
Making a Difference

1952-2002



NEWS YOU CAN USE

BRIEFLY

Revision to military leave policy

The Laboratory has made a technical revision to the extended military leave policy to give employees activated following Sept. 11 more options on using or retaining vacation leave credits.

Employees may now choose to retain their vacation accruals for the entire period of leave, to cash out some or all of accrued vacation at any time during the leave, or to use accrued vacation to receive Laboratory pay once all paid military leave has been exhausted. Human Resources is working with Payroll to ensure that employees whose vacation credits were automatically cashed out under former policy are notified and given the opportunity to reinstate the credits by repaying the cashed-out

amount to the Laboratory. Questions on the technical change may be directed to Virginia George at george13@llnl.gov or 2-6597.

Engineering Day celebration

The Engineering directorate once again hosts hundreds of Tri-Valley and Central Valley middle school students today as part of the annual Engineering Day celebration. Engineering Day is the Lab's way of participating National Engineers Week, sponsored by the National Society of Professional Engineers.

"We at LLNL are happy to celebrate Engineers Week with special emphasis on future engineers," said Glenn Mara, associate director for Engineering. "Engineers Week gives us a special opportunity to reach out to the community, connecting the engineers of today with the engineers of tomorrow."

This year the celebration kicks off at 9 a.m. in the West Café and the Bldg. 123 auditorium with

hands-on exhibits provided by LLNL Engineering.

The fifth through eighth graders will discover the fun of engineering with the "Roboland" exhibit in the West Café, and learn about the lives of significant engineers with "Mystery Engineer" in the auditorium lobby.

At 10:45, the students will be assembling in the auditorium for an interactive talk with Greg Brown, director of exhibits at The Tech Museum of Innovation in San Jose. He plans to introduce the students to the many aspects of engineering that they enjoy in their everyday lives.

Several lab engineers will also be speaking to the students, giving them the interesting details of the daily lives and hobbies of real, professional engineers. The LLNL engineers will also treat the students to several door prize drawings featuring interestingly engineered toys.

Technical Meeting Calendar

Friday
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PHYSICS & ADVANCED TECHNOLOGIES

"Search for CP Violation in Tau lepton Decays," by Yurri Maravin, Southern Methodist University, Texas. 2:30 p.m. Bldg. 211, room 227 (badge required). Contacts: Doug Wright, 3-2347, or Pat Smith, 2-0920.

INSTITUTE FOR GEOPHYSICS & PLANETARY PHYSICS

"The Formation and Evolution of Planetary Systems: Placing Our Solar System in Context with SIRTf," by Michael Meyer, University of Arizona. Noon, Bldg. 319, room 205. Contacts: Adam Stanford, 3-6013, or Josie Morgado, 4-5201.

Monday
25

UC DAVIS, DEPARTMENT OF APPLIED SCIENCE

"MEMS Transducer For Biosensing" by Zoe Strong, UC Davis, Department of Applied Science Graduate Student, 4 p.m., Bldg. 661 (Hertz Hall), room 7 (open area). Refreshments served at 3:30p.m. for a "meet the speaker" session before seminar. Contact: Estelle Miller, 2-9787.

CMS/MATERIALS SCIENCE & TECHNOLOGY

"Understanding Sputter Deposition: The Role of Particle Incidence Energy During Metal Growth," by Joshua Pomeroy, Cornell University 10 a.m., Bldg. 235, gold room (uncleared area). Contacts: Jim Tobin, 2-7247, or Roberta Marino, 3-7865.

INSTITUTE FOR GEOPHYSICS & PLANETARY PHYSICS

"Towards Detection of the Directional Flux of Dark Matter WIMPs," by Jeff Martoff, Temple University. 2 p.m., Bldg. 319, room 205 (badge required). Contacts: Bill Craig, 3-1471, Josie Morgado, 4-5201.

ENERGY & ENVIRONMENT

"The Model Coupling Tool Kit: Building Blocks for Parallel Earth System Models," by

Jay Larson, Argonne National Laboratory. 10:30 a.m., Bldg. 170, room 1091 (uncleared area). Contacts: Art Mirin, 2-4020, or Karen Common, 2-2486.

Tuesday
26

CHEMISTRY & MATERIALS SCIENCE

"The Materials and Chemistry of NIF," By Tom Bernat, discussing ICG target cryogenics. 2 p.m., Bldg. 235, room 1090 (uncleared Area). Contacts: Tomás Díaz De La Rubia, 2-6714, or Lisa Rose-Webb, 2-5609.

Wednesday
27

INSTITUTE FOR SCIENTIFIC COMPUTING RESEARCH

"Mesh Based Modeling Methods for Computational Biology Applications," by Harold Trease, Pacific Northwest National Laboratory. 11 a.m., Bldg. 551W, room 1400 (property protection area). Contacts: David Brown, 4-3557, or Leslie Bills, 3-8927.

MATERIALS RESEARCH INSTITUTE

"Toward a general theory of Bose-Einstein condensation," by Dionisios Margetis, MIT. 3:30 p.m., Bldg. 219, room 163. Contacts: Riad Manaa 3-8668, Joanna Allen, 2-0620

Thursday
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COMPUTING APPLICATIONS & RESEARCH

"The Past, Present and Future of Software Test Automation Tools," by Gregory M. Pope. 10 a.m. Bldg. 481 Auditorium (badge required). Contacts: Jeannette Tootle, 3-6054, or Maureen Midkiff, 3-9769.

CHEMISTRY & MATERIALS SCIENCE

"An Overview of Research and Programs in the Proliferation Detection and Defense Systems Program," by Jean H. de Pruneda, LLNL. Noon, Bldg. 151, room 1209 (uncleared area). Contacts: Tony Esposito, 4-3497, or Kristine Ramirez, 3-4681.

INSTITUTE FOR GEOPHYSICS & PLANETARY PHYSICS

"Quantum-gravity Theories and Gamma-ray

Astrophysics," By Giovanni Amelino-Camelia, University of Rome "La Sapienza." 10:30 a.m. Bldg. 319, room 205 (badge required). Contacts: Hye-Sook Park, 2-7062, Josie Morgado, 4-5201.

PHYSICS & ADVANCED TECHNOLOGIES

"How much atomic physics can be (still) done on magnetically confined fusion (MCF) plasma devices?" by Professor Finkenthal, Johns Hopkins University. 10:30 a.m., Bldg. 219, room 163 (badge required). Contacts: Kevin Fournier ,3-6129, or Eryn Davis, 2-0475.

Friday
1

MATERIALS RESEARCH INSTITUTE

"Computational Materials Science and Chemistry Summer Institute." The Institute will run from mid-June to mid-August. To be considered, prospective participants need to fill out the interest form at <http://education.llnl.gov/mri/>. The deadline for application is March 1, 2002. Questions should be addressed to Mike McElfresh, 2-8686.

INSTITUTE FOR GEOPHYSICS & PLANETARY PHYSICS

"Black Holes: Demographics and Galaxy Evolution," by David Merritt, Rutgers University. Noon, Bldg. 319, room 205 (badge required). Contacts: Adam Stanford, 3-6013, or Josie Morgado, 4-5201.

H DIVISION

"Optical Spectroscopy at Multimegabar Pressures: Recent and Future," by Alexander Goncharov, Carnegie Institution of Washington. 10:30 a.m., Bldg. 219, room 163 (badge required). Contacts: Choong-Shik Yoo, 2-5848, or Donna Vercelli, 2-0976.

The deadline for the next Technical Meeting Calendar is noon, Wednesday.

Send your input to tmc-submit@llnl.gov.

NEWS OF NOTE



Lab researcher's innovative work recognized

By Gordon Yano

NEWSLINE STAFF WRITER

Abbie Warrick, an Engineering employee who has worked on the Lab's Extreme Ultraviolet Lithography Project, has received a prestigious International SEMATECH Corporate Excellence Award.

The award is the highest presented by SEMATECH, recognizing exceptional performance, achievement and innovation in contributing to the semiconductor industry. International SEMATECH is a consortium of semiconductor companies collaborating on research and development for semiconductor manufacturing technology.

Warrick received the award in December at SEMATECH's facilities in Austin, Texas, where she is wrapping up a two-year stint as part of the consortium's Advanced Defect Detection Project. The award recognizes work performed by Warrick and project teammates Amy Engbrecht and Rick Jarvis (both from Advanced Micro Devices) in helping produce Programmed Defect Reference Wafers. These silicon wafers are like the wafers used to print computer chips, except these contain intentional defects. The wafers are used to test the inspection tools that manufacturers use to spot defects in computer chip production lines.

The reference wafers developed by Warrick's team contain various types of defects in a variety of sizes, down to 60 nanometers, or billionths of a meter.

"We worked to create reference wafers that give manufacturers a more precise way of determining how well wafer inspection tools are working,"



Abbie Warrick

explained Warrick.

"Each inspection in manufacturing takes time away from production, so we want to develop a methodology that helps optimize the inspection process."

The reference wafers serve to assist inspection tool manufacturers and semiconductor companies in: tool benchmarking (comparing various manufacturers' tools), tool set-up (verifying that a tool is operating properly after installation), tool monitoring (for consistency) and tool matching (ensuring that different tools within the same fabrication facility perform the same way).

SEMATECH makes sets of these wafers available to the semiconductor industry to further boost quality control in chip production. Prior to the work of Warrick's team, reference wafers were not available across the industry.

"Our goal was to create wafers that will help inspection tool suppliers prepare for next-generation wafer production," Warrick said.

Warrick is the first LLNL employee selected to spend time at International SEMATECH.

"I'm honored to have received this prestigious award from International SEMATECH," said Warrick. "There are many exceptional scientists and engineers here who ensure that the industry stays on the International Technology Roadmap for Semiconductors."

"The work of Abbie and her teammates has been the highest ranking project within our Metrology and Yield Management Tools program," said Fred Lakhani, a senior member of SEMATECH's technical staff who sat on the awards committee. "From innovation to execution, Abbie and her teammates

have delivered, and in a short timeframe."

Rick Jarvis, Yield Management Tools program leader and Abbie's supervisor at SEMATECH, said "We're absolutely thrilled that SEMATECH recognizes the project's depth and quality of execution."

"Abbie and Amy (Engbrecht) are exceptional people. They are unique resources, and they now have a unique knowledge of the industry. It's been a real pleasure working with them."

Warrick, a University of Arizona graduate with a Ph.D. in applied mathematics and a master's in electrical engineering, first came to the Lab as a summer student in 1992, returning as a full-time employee in 1996. Before taking her current assignment at SEMATECH, she worked on the Lab's Extreme Ultraviolet Lithography Project, a multi-lab/industry collaboration to develop EUVL as the next-generation technique for producing computer chips.

"We were thrilled when Abbie was chosen to go to International SEMATECH, and we're extremely proud of her achievements," said Scott Burkhart, Warrick's group leader here at the Lab.

Don Sweeney, who heads the Lab's EUVL Project, said, "I'm really pleased Abbie has done so well at SEMATECH and has been able to make such an important contribution. It's illustrative of not only her considerable abilities, but also of the potential of Lab employees, in general."

Warrick feels the experience gained working at SEMATECH has provided her with a greater perspective on the research and development process.

"At SEMATECH, the focus is on the path toward commercialization — taking an idea, maybe one developed at a place like Livermore, and moving it from the lab into manufacturing."

"I have a greater appreciation for the long-term value of each step in the process, and not simply the initial prototype development. I think this perspective will be helpful when I return to the Lab."

"She's gone to the next level at SEMATECH, and we're looking forward to having her back," said Burkhart.

Lab 3D simulation prepares Salt Lake for emergency

Laboratory researchers have created a three-dimensional simulation of how a biological or chemical release could spread in and around Salt Lake City.

The simulation was not created in response to any known threat. But rather, it was made to display how a dangerous airborne substance would flow through downtown buildings in Salt Lake City as well as the outskirts of the site of the 2002 Winter Olympics in case of an accidental release or terrorist attack.

Scientists working in the Lab's National Atmospheric Release Advisory Center used weather and wind flow data over topographical maps to determine how a release might spread over the area if it came from the surrounding mountainous areas, or if it was released in the Salt Lake basin.

Detailed weather data was fed into a three-dimensional model that portrays exactly how the layers of wind are blowing and how the winds will shift. The

Salt Lake City simulation makes adjustments for how the buildings will block and channel the flow between them along street "canyons" (such as those found on downtown streets between high-rise buildings).

The simulation program, which will be capable of simulating a chemical, biological or radiological release in an urban environment any place in the world, is at the research stage and cannot operate in real time yet, said Jim Ellis, the center's director. "This is not operational yet," Ellis said. "But this is what we are capable of doing."

The Salt Lake City simulation was created before the Olympics as a model for potential future atmospheric releases in a largely populated area.

NARAC is the national emergency response service for real-time assessment of incidents involving nuclear, chemical, biological or natural hazardous material. The center's main function is to support the Department of Energy and the Department of Defense

for radiological releases.

When a hazardous material is accidentally released into the atmosphere, NARAC scientists can map the probable spread of contamination in time for an emergency manager to decide if taking protective action is necessary. Since 1979, NARAC has responded to more than 160 alerts, accidents and disasters and supported more than 850 exercises.

Besides accidental radiological releases, such as Three Mile Island and Chernobyl, NARAC has assessed natural disasters such as volcanic ash clouds (Mount Pinatubo in the Philippines) and earthquake-induced hazardous spills. The center also forecasted the path of smoke plumes from the Kuwaiti oil fires during the Gulf War and several toxic chemical accidents including the Tracy tire fire in 1999.

"We're like the fire department," Ellis said. "Ready to go whenever we're called on."

Volunteers needed to construct Laboratory 50th anniversary parade float

In honor of its 50th anniversary, the Laboratory will put together a special float that will appear in a number of community parades. The float will highlight science education and mark five decades of cutting edge technology.

The float will be unveiled Saturday, March 16, in Dublin, in honor of St. Patrick's Day. Other parades include the Livermore Rodeo on June 8; the Alameda County Fair kickoff in Pleasanton, on June 22; and the Fourth of July procession in Danville.

Volunteers are needed to help build this special float. You supply the elbow grease, we'll supply the tools and instruction. No previous construction expe-

rience is required — just an ability to hammer, apply crepe paper and streamers and have fun.

Float construction will be held from 9 a.m. to 1 p.m. on Saturday, March 2, in the Visitors Center parking lot. In case of rain, the construction will be moved to March 9.

Approximately 10 employees also will be needed for each parade to ride the float. PAO is taking requests for these positions on a first come, first serve basis. So if you've ever had a hankering to practice your best Rose Parade Queen wave, then call Scott Wilson at 3-3125 and put your name on the list for the parade of your choice.

In addition to the float, PAO will be forming the "Nerdy Scientist Drill Team" — a collection of stereotypical scientists in lab coats doing their best drill team moves to music. These volunteers will walk behind the float and perform at various stops along the parade. Think lawnmower brigades and drilling barbecue grill teams of community parades past and you get the idea. Costumes will be provided. Volunteers for the drill team corps should also contact Scott Wilson to obtain the practice schedule.

"This is a great opportunity for all lab employees to help kick off the 50th anniversary celebration," said Susan Houghton, deputy director of Public Affairs.



CLASSIFIED ADS

AUTOMOBILES

1987 GMC full size van. Good condition. \$1,800 (510) 276-1135

1992 - Dodge Grand Caravan with new tires and transmission, A/C, not much used, \$3500 925-518-5523

1962 - Fiat Convertible - Needs Body/Motor Restoration. All parts inclusive with a new top. Must See! 209-479-1917

1995 - Saturn SL1, 4 door, automatic transmission, 4-cylinder, gold, a/c, 81K, original owner, runs good, missing right mirror, \$3,700.00 obo 209-823-8767

1997 - Red Honda Prelude, Alloy Wheels, L. seats, ABS, Moon Roof, Spoiler, New Battery, Nearly new tires. 55K \$13995 EX.Cond. Garage kept. 925-373-1964

1992 - 1992 Saturn Coupe. Great condition, inside and out. Perfect for a student. Power windows and door locks. Call for more info. \$2500 firm. 209-835-5543

1994 - Jeep Grand Cherokee Laredo 4WD! 6 Cyl 4 liter Auto Trans, loaded. \$1,500 under KBB! \$9000/obo. Talbot 209-599-2299

1964 - Ford Ranchero 260 V-8 Runs Good, Automatic, Needs Body Work, anxious to sell 209-835-7185

1996 - Acura Integra LS 66k miles, 4 door, moonroof, power windows and locks, cruise control, Alpine CD Player, original owner. \$9,000 925-625-1815

1993 - Nissan Altima GXE, 4D, auto transmission, blue, super clean, 137K miles. 4-wheel ABS, air bag, A/C. Looks/runs great. \$3200. 925-456-5848

1986 - Toyota Corolla, 120K mi., auto, AC, clean, runs great. \$1500 OBO. Call after 6. 925-838-9667

1989 - Pontiac Bonneville LE, power locks/windows, excellent 3.8 liter engine & atuo trans, new paint, just smogged - \$1550 OBO 925-829-1794

1995 - Ford Explorer, Sport 2D, 68K miles, 4WD, tow pkg, running board, roof-rack, air, ABS, prem sound, loaded, great condition. \$8900/offer 925-447-6707

1994 - Chevy Astro Van EXL, dark red, 8 passenger, 4.3 liter, 4 wheel ABS, fully loaded, 120K miles, good condition, \$5500/BO, 925-443-1813

2000 - Pontiac Firebird convertible, V6 3.8L, AT AC ABS ALL POWER, premium CD, warranty \$17500 OBO 925-556-1169

1998 - Ford Mustang, low miles, motivated seller, \$10,500 OBO. 925-447-5303

AUTOMOBILE ACCESSORIES

305/70R16 ProComp Tires on 16x8 Weld Racing wheels w/ caps. Fits late model GM trucks. Like new, less than 750 miles. Paid \$1,700; Asking \$1,250. 209-365-0412

Rancho skid plate and RSX shocks. Fits late model GM trucks, no dings, like new and less than 750 miles. \$250 209-365-0412

Flowmaster 50 series cat-back exhaust \$250; ProTecta bed mat \$60; R&D Fog light controller \$20. All like new. Fits late model GM trucks. 209-365-0412

Gear Vendors Overdrive. Brand new 3DO375A unit, still in box. Fits long shaft TH 400 Tranny. Cost \$2495, Sacrifice for \$1650/offer 925-932-3794

Chevy 396, Aluminum intake, oval port heads, long block, complete with water pump, alternator, etc. \$600. Call after 5pm or weekends 925-455-0149

Bug Shield for Mazda MPV \$20 925-455-1730

205X75X15 tire + wheel,2 mud/snow tires 13 in.,mazda trk.rear

window,P225X50XZr16 Dunlop tire 925-735-7002

Tires, mud and snow 265/75 16 inch mounted on 6 lug aluminum alloy wheels \$250 925-516-8339

BICYCLES

1996 scooter w/canopy for the physicaly challenged. Great condition \$900 OBO 925-456-6720

BMX Free Agent Raceway Bike sealed bearings Chromoly frame 3 piece crank extras \$300 near new condition 209-835-2416

20 inch BMX style bike. Green Cami color scheme. Like new condition. \$50. 650-364-5951

Specialized Hardrock Mountain Bike. 20inch frame, 26inch wheel, Avocet seat. Great condition, hardly ridden. \$150 209-835-3352

BOATS

1995 Ski Sanger new Ski Tower,looks and runs like new. Asking 16,000 or B.O. 209-632-4568

Propeller, stainless, variable pitch for Merc outdrive. 925-447-8804

1977- 19 ft Sea Ray bowrider in great condition! V8. I/O motors. 380 hrs. Bimini top. Seats 6-8. \$3,695/ob. Richard, 209-463-9900 to test drive! 209-832-2790

CAMERAS

Lenses for Nikons: 50 mm f/2 standard, 28 mm f/2.8 wide angle, 135mm f/2.8 telephoto, +filters. \$50 OBO 925-449-4669

ELECTRONIC EQUIPMENT

Power supplies, 125VAC input: Condor 24Vdc, 225ma, \$5. PowerOne 5Vdc, 1500ma, \$10. Sierra Power Sys +/- 15Vdc, 3000ma, \$15. 925-833-8241

Home stereo component. Denon TU-750S tuner with 7 presets. Excellent working condition. \$50 OBO. 925-449-5481

Monitors, other computer stuff call....what do you need? Word processor.battery backup 925-735-6002

Scanner- HP Scanjet 6200, 600dpi optical, lots of software, just bought a different model that scans slides. Orig.\$399, sell \$95. 925-447-8415

Tape deck, Pioneer dual deck \$30, PC 120 MHz, 16 MB, 14 inch monitor \$80 all excellent condition 925-484-9028

NAD 116 preamp. Outstanding sonics, excellent condition. Orig. owner. w/box, manual and remote. \$250.00 209-825-4809

GIVEAWAY

Sailboard Boom, FREE 925-455-1730

Groelsh type resealable beer bottles, 13 up for grabs. 6 glass blocks, 7.5 x 7.5 inches. 925-833-8241

Free roosters - Buff Orphington and Barred Rock ~8 mos old. 925-443-1547

Free - JennAir electric grill/griddle for countertop with down draft. 925-447-7524

HOUSEHOLD

Comer group sofa 3 pcs. Very nice condition. Also, pine coffee table that works well with sofa. \$400.00 for all. 925-449-8009

Shower doors. sliding glass shower doors for use with tub/shower.In good shape with all the hardware. \$50. 925-447-3780

Steel Storage Shed 10ftx12ft Double sliding doors Great Cond. \$100.00 925-

560-9657

King Size Bed with Box Springs and Mattress Dark wood finish with Head Board and Mirror. Gd condition. \$100. 209-835-9082

Cherrywood dining table set with 2 leafs and six upholstered chairs. \$450.00 OBO. 209-832-7074

Small oak desk; perfect shape; \$50; 925-443-9594

Dining room set. Black/Green lacquer.Two piece china cabinet,table with one leaf,and six chairs. Excellent condition. \$700.00/Best offer 925-513-0854

Sears Kenmore Chest Freezer, 15 Cubic ft., \$80. Great for maximizing your food budget. 925-455-6516

Waterbed Queen,mirror bookcase headboard,semi-waveless, liner,heater.\$100.00 call after 5:30PM 925-455-6886

Multi-family garage sale on Dartmouth Way, Livermore. Saturday Feb 23 925-606-7482

MOTORIZED CHAIR/SCOOTER - For persons with limited mobility, electric rechargeable, less than a year old, \$1200. 925-449-6821

Drapes,various rods,Elvis new pic.,bowling balls/shoes..photo albums,photo bags,misc. photo stuff.,new Lino 76 in.by 67in., furnace filters(new). 925-735-6002

Princess Cedar Chest by Lane. Guaranteed for \$1000.00 against moth damage. Excellent condition. \$99.00 925-449-8035

Magic Mill stone wheel grinder. Make your own stone ground flour. 3/4 hp motor, oak cabinet. \$110 925-447-6948

Farm table and 4 chairs, solid wood. \$125 925-516-8339

Ortho-Pedic, King size bed with box spring and standard metal frame - Good condition. \$200.00 510-792-1538

Whirlpool free standing dishwasher \$40 925-447-5303

LOST & FOUND

FOUND on 2/6/02 in B132N first floor womens restroom - insulated lunch bag. 925-829-2848

Lost sentimental gold wired earring w/Amethyst and a diamond on top. If found please call me. 925-439-7394

MISCELLANEOUS

Whitfield Advantage II -T pellet stove with fast fire self ignitor and pedestal mount. Excellent condition. \$600 (510) 276-1135

Commercial Soda Machine - Great Shape 209-479-1917

CHEST FREEZER, Mont. Wards brand, 8.4 cu ft, excellent cond., \$75.00 925-443-2172

Donated medical supplies and equipment will be sent to Red Cross hospitals in Torreon,Mexico.Tax receipt available. 925-447-7394

Moving sale on Sat,2/23 from 8-1p.m. 925-447-5132

Playpen \$60, High Chair \$30, Umbrella Stroller \$10, Easel \$20. All excellent condition. 925-455-6516

Old Book, MADAME CURIE by Eve Curie, pub 1943. Wonderful insight to Marie Curies' life. Best Offer before March 1st COB. Talbot 209-599-2299

Generator, Generac 15KW, Brand new, still in crate. Water cooled, runs on natural gas. Automatic transfer switch included. \$4000.00 Call 209-838-1490

MOTORCYCLES

1987 - Suzuki Savage 650cc, 6K miles, \$1000/obo, 925-447-0220

See complete classified ad listings at <https://www-ais.llnl.gov/newsline/ads/>

1998 - HD 1200 XLH - 5K miles - many extras! \$8K or best offer 530-644-7820

MUSIC INSTRUMENTS

Wurlitzer Spinet Piano, \$950. Excellent condition, beautiful tone, well maintained. Perfect for beginning/intermediate student or casual pianist. 925-455-6516

Gibson,Fender,Rickenbacher,Guild guitars and Peavey Classic 30/w extra cab and Crate DSP amps. Premier Drums. All excellent. Good prices. 925-373-0483

PETS & SUPPLIES

English Springer Spaniels. 6 males, 6 females 4 weeks old. \$450 ea. AKC and first shots. All are liver and white. Call home # only. 209-836-3749

Two beautiful, healthy cockatiels with cage and accessories, \$50. 925-606-6071

Dog Crate/Pet carrier. Approx 3 ft long, 2 ft wide. Excellent condition. Great for housetraing puppies and small dogs. 925-829-3226

Grey Cockatiel, talks, w/cage, \$35; Zebra Finches w/cage, \$40. 925-443-2388

UMBRELLA COCKATOO friendly, tame, needs a new home,preferably with other feathered friends! Comes with 2 cages, toys, food. \$1000. 510-834-6405

Akita Puppies, Health guarantees, 4 boys 1 girl. Champion lines. Avail. Feb 9th. \$500.00, Show kennel-view at 925-449-5626

White dwarf bunny, with cage and toys. \$30 209-833-6443

RECREATION EQUIPMENT

CardioGlide Plus by Weslo. Users video and manual included. Speed, time, distance display. Livermore. \$45 925-449-7646

Womens downhill ski boots size 9 and skis (both barely used) \$150.00 or best offer. 209-948-0286

Shimano EnduroII Clicker Snowboard Boots - Sz10. Only used a couple times & in near perfect shape. \$65 209-869-5820

Boys high school discus and shot put. Free. 925-443-2510

Schwinn Airdyne Exercycle (both lower & upper body workout). Like new.Top-rated. Moving, need to sell. New \$600+. Sell \$195. 925-455-5439

Child size padded hockey pants \$15. 415-928-4469

Mens Nordica ski boots, size 10.5-11, \$30 925-447-8845

RIDESHARING

Express your commute, call 2-RIDE for more information or visit <http://www-r.llnl.gov/tsmp>.

Modesto - Looking for car pool partners and share driving.Hours flexible. 209-522-7136, ext. 3-3575

Manteca - Rider/Driver for Carpool. Drive 1 day wk & 1 day mo. Relax the rest. 7:45-4:30. 209-823-5085, ext. 2-0643

San Jose - Looking for carpool partner from San Jose-South Bay area. 408-578-8480, ext. 2-8061

Modesto - Vanpool seat available. 7:45 - 4:30. Captain chairs/reclining, reading lights. Can help drive to reduce rate plus pretax transit program. 209-521-9047, ext. 2-5177

SERVICES

HOUSE CLEANING SERVICE, rea-

sonable rates, Tracy area preferred. 209-836-9082

Interior & Exterior House Painting - Over 16 yrs experience, free estimates. 925-447-5132

FLOORING - Carpet, linoleum, wood laminates. Reliable, reasonable rates, 27 yrs experience. Licensed /bonded/insured 925-516-9510

Wedding Photography; 21 years exp. Only medium format cameras used. You keep the negatives. Reasonable prices. 925-829-1474

SHARED HOUSING

Livermore - Room for rent. Looking for a clean/responsible person to share my 2bd/1ba home. N/S. No pets. \$650 + dep and 1/2 utilities. 925-443-2270

TRUCKS & TRAILERS

1999 Dodge Dakota R/T Club Cab, Extremely clean/Fully loaded, 33,000 Miles, 7yr/75K Warranty, \$19,900 O.B.O, 925-413-7528

99 - Coleman Tent Trailer, Utah. Sleeps 9. Used three times, garage stored. Excellent condition. \$8,700/OBO Day phone 209-473-8627/ 925-706-8179

1985 - Chevy Suburban (80,000 mi on diesel engine)needs some mech & body work. Must see.\$1200 925-447-5132

1995 - Ford Explorer, Excellent condition. A must see. New tires. All power, cassette, tow package. Asking Blue book price \$6,900.00 OBO 510-537-7222

1985 - Tent trailer; excellent condition- make offer. 925-735-6002

1995 - Chevy truck, V6, A/T, A/C, cust.wheels/exhaust, 113K mi., excell.cond, \$8200/obo. 925-803-1972

VACATION RENTALS

Maui, HI - Kahana Reef oceanfront 1BR/1BA condominium. Beautiful two-island view, oceanside pool, and BBQs. Low LLNL rates for year-round reservations. 925-449-0761

Kailua-Kona, Hawaii - 2BR/2Bath condo on Alii Drive. Ocean view, 2 pools, exercise room and warm weather. Call for Lab rates. 925-833-6061

SOUTH LAKE TAHOE - 3 Bedroom 2 bath Chalet, newly remodeled, nicely furnished,all amenities,close to all skiing, Reserve Now! 209-599-4644

WANTED

Wanted a sligtly used recumbant exercise bike for disabled person. 510-537-7222

Used billiard pool table. Any model. 925-454-0931

Housekeeper for Dublin or Livermore area, every two weeks. 925-833-6061

Games for Super Nintendo wanted. 925-455-1730

Want bunk bed; call relay 1-800-735-2922 & ask for TDD 925-862-2275

El Camino 1969-72. Must be in running condition. 510-881-8536

Wanted: Used carousal slide projector for home use. 925-449-5481

4 pcs.high density foam 20 in.by 20 in. 925-735-6002

Upholsterer to recover two medium sized wing chairs. Have fabric. Will pay reasonable rates. 925-846-2119

Lab’s star research to shine at astrophysics conference

By Anne M. Stark
NEWSLINE STAFF WRITER

The 4th International Conference on High Energy Density Laboratory Astrophysics at the University of Michigan this weekend brings together scientists who not only look at and model exploding stars, stellar jets and extrasolar planets, but also the scientists that theorize and perform laboratory experiments to try to recreate some of the same phenomena that happens in the universe.

The Lab is featured prominently at this year’s conference with eight astrophysicists and astronomers joining more than 100 international scientists. Lab physicist Bruce Remington has been a key organizer of the conference since its inception in 1996. The conference, originally organized by Lab scientists, is in its fourth year.

During the past several years, international research teams have conducted astrophysics research using large lasers and z-pinch generators to simulate strong shock phenomena, radiation flow, radiative shocks and jets, complex equations of state and relativistic plasmas that are common conditions found in

supernovae, molecular clouds and other phenomena of the universe.

Understanding the surroundings of black holes is one area that Lab physicist Robert Heeter has looked into using a z-pinch generator to accurately interpret the spectra from growing black holes. The z-pinch allows scientists to recreate the physics in the immediate vicinity of a black hole in a laboratory setting. He is scheduled to discuss these experiments in his talk entitled: “Plasma Photoionization Equilibrium Experiments to Benchmark Models of Astrophysical Plasmas.”

Astrophysicist Richard Klein will be discussing how stars are formed by interstellar cloud collisions. The high densities and radiative shocks created by the collision of two interstellar clouds can trigger a “cosmic nursery” where stars are born. His talk is entitled: “Induced Star Formation by Interstellar Cloud Collisions.”

Astronomer Wil Van Breugel will present his observational research on the role of jets and wind in large forming galaxies. Using earth and space-based observatories, Van Breugel has studied how galaxy collisions trigger some of the most dramatic starbursts

(the formation of whole strings of stars all “turning on” in synchrony) and has also observed how shocks from jet/cloud collisions heat up previously invisible, cold gas. His talk is titled: “Jets and Superwinds in Massive Forming Galaxies.”

Other LLNL researchers include Harry Robey, who is scheduled to discuss “The Transition to Turbulence in Laboratory Scale, Astrophysically Relevant Plasmas.” Robert Cauble will discuss “Building a High Pressure-Density Database for Giant Planets: On and Off Hugoniot Measurements of Carbon and Water” as it relates to planetary interiors. Remington will talk about “Hypervelocity Solid State Microflyer plates on Omega and NIF.” Jave Kane will discuss “Pillars of Creation: Hydrodynamics of the Eagle Nebula.” He will show how lab experiments with large lasers such as Omega and NIF can recreate the hydrodynamics of radiatively driven molecular clouds. In addition, physicist Dmitri Ryutov will be participating in the poster session with posters entitled: “Force-Free Random Magnetic Field as a Source of Stiffness for Photoevaporated Clouds” and “Experimental Signatures of Tilted Radiation Instability.”

OPCW

Continued from page 1

to identify the “suspected” chemical weapons compounds and to prepare a report, said Lab principal investigator Armando Alcaraz.

The Livermore samples were prepared for the test by TNO, a laboratory in the Netherlands. Another laboratory, VERJFIN in Finland, evaluated the Livermore test results.

In order to achieve OPCW accreditation, the Laboratory must pass two more proficiency tests — one in April and one in October, Alcaraz said.

If the Laboratory passes the accreditation, the Lab would receive samples for analysis once or twice a month from OPCW inspections of U.S. chemical plants.

Among the Livermore researchers who participated in the OPCW test were Hugh Gregg, a co-principal investigator; Rich Whipple, Tuijanna Mitchell Hall, Andy Vance, Greg Klunder, John Reynolds, Don Bajao and Bob Maxwell.

“We are pleased with the results of the OPCW proficiency tests,” said Brian Andresen, Forensic Science Center director. “The FSC has really come a long way toward quality sample handling and ultratrace chemical analysis techniques that are now recognized worldwide.”

As part of the OPCW accreditation process, the Laboratory’s Forensic Science Center has been named an International Organization for Standardization (ISO)-accredited laboratory in the field of chemical testing by the American Association for Laboratory Accreditation.

SURVEY

Continued from page 1

- Promoting organizational values of rigorous debate in an atmosphere of mutual respect.
- Increasing the Lab’s investment in employee and career development.
- Expanding the use of flexible work schedules, including adding the option of a 9/80 workweek
- Increasing opportunities to participate in innovative R&D.
- Expanding the availability of work/life services and resources including building a new Central Cafeteria, adding new recreation and fitness facilities, and offering convenience services.

Total Rewards Program

The Total Rewards Program is an acknowledgment that employees should evaluate pay, benefits, awards and recognition, career development opportunities, and work/life balance in assessing their situation. While the survey found the Lab already maintains competitive salary and pay scales, the Lab will look to expanded use of non-base pay for special assignments.

Lab benefits were found by the survey to be excellent, but the Lab will continue to explore additional opportunities. Finally, the Lab will recognize exceptional contributions by expanding its awards and recognition program.

“We will aggressively monitor the market in each area and implement additional changes, where appropriate, to keep our Total Rewards Program competitive,” said Tulk.

Performance management

A review of best practices found that ranking is a core component in top R&D organizations. In fact, the trend is toward ranking in those organizations that do not already have it in their evaluation system. While ranking will be retained at LLNL, the review also found that the Lab’s system can be improved compared to other top R&D organizations.

Modifications will include:

- Adopting institutional principles for consistent implementation of the Performance Management System.
- An annual statement of performance expectations for employees, including alignment with organization-

al goals and relationship between job content and ranking.

- Supervisor training to assure consistent application of this system.
- Feedback from an annual institutional review of the process.

“Implementation of the system will be monitored through annual Director’s Workforce Reviews,” Wadsworth said. “Specific changes to the system will be developed and implemented over the next 12 months.”

Employee development

“Guidelines for career development and training will be developed at an institutional and directorate level,” Tulk said. Opportunities for employee development will also be included in new employee orientation and supervisory training courses. Progress on employee development will be evaluated during annual Director’s Workforce Reviews.

Other changes that will be made include:

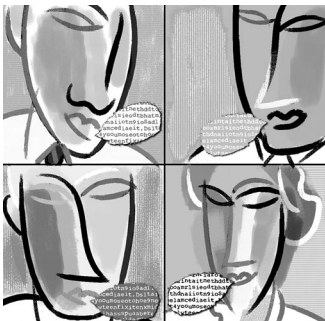
- Each directorate developing and communicate its process for managing career development and training.
- Post-doc employee development will be enhanced through tailored orientation and career-planning discussions.
- State-certified apprenticeship programs for the 800 and 900 job classifications will be re-established.

Organizational values

A LLNL core value is a culture of responsible, empowered employees who uphold Laboratory standards of rigorous scientific inquiry, debate and review. But these have to be conducted in an atmosphere of collegial respect and courtesy, explained Wadsworth. Managers have a responsibility to cultivate this culture in their organizations.

As a result of the survey, all employees will be expected to contribute to this culture by:

- Engaging in rigorous and thoughtful debate and review of plans and ideas at all scientific and organizational levels.
- Challenging accepted ideas where new data or new thinking can call them into question.
- Maintaining a respectful and courteous atmosphere through their own actions and by challenging dis-



respectful or discourteous behavior.

- Appealing for a second opinion when they believe their ideas are not receiving a fair hearing.

Flexible work schedules

Because no single Labwide work schedule system can meet the institution’s needs, a number of options are available. These include a flexible 5/8s schedule, 4/10s, and telecommuting. Now a 9/80 workweek has been added.

Tulk said guidelines will be provided to managers, supervisors and employees on how to best utilize these options. An essential element of flexible scheduling will be supervisor/employee accountability to prevent “disconnects” with customers and sponsors or losses in productivity.

Research environment

As suggested by the survey, Wadsworth said that the Lab will develop a “quick review” LDRD process for small-scale research opportunities. Where possible, the Lab will streamline procedural and training requirements to minimize impacts on research.

Work/life balance

A number of services and resources will be significantly enhanced to enable employees to better balance work/life issues.

Among the services provided:

- A new Central Cafeteria with enhanced food services. Construction should begin this fiscal year.
- Converting the old LLESA store (Bldg. 317) into a meeting place for employee networking groups. Targeted completion is Oct. 1.
- Constructing a sport court surface for volleyball and basketball near the pool and shower facilities. Construction is expected to begin this fall.
- Opening the new LLESA Time Zone store near Bldg. 415 by May 1, with added features including mail delivery and receiving. A dry cleaning service will be added by the fall.
- Developing plans for additional fitness facilities in the South Mall area.
- Exploring options for expanding/enhancing current child care services.



THE BACK PAGE

Lab demonstrates counterterrorism technology at Nevada Test Site

Laboratory Executive Officer Ron Cochran hosted a contingent from California at the Nevada Test Site on Wednesday. The event was presented for a host of Washington dignitaries that included (left to right) Nevada Senator Harry Reid; Tom Ridge, Office of Homeland Security; FEMA Director Joe Allbaugh; and General John Gordon, administrator for the National Nuclear Security Administration (not shown).

The group watched a demonstration of Livermore's truck-stopping technique (inset) developed for the California Highway Patrol, and an NNSA simulation of a terrorist assault on a nuclear facility.



DAVID SCHWOEGLER/NEWSLINE



MARBURGER

Continued from page 1

"Much of what the labs have already been doing is so relevant to the war on terrorism," Marburger said, "so there is no need for a specific big budget increase in relation to Sept. 11. Many relevant programs began long before the current situation."

Marburger listed four major Bush administration science priorities, and said the national labs must now justify their government support on these bases: national security, energy, environmental issues and discovery-oriented science.

"We need to fund the physical sciences because they form the infrastructure for a whole array of advancements and developments in different fields. We need to move away from riding the coattails of nuclear weapons."

Marburger spoke of the history of the national labs as a part of their continuing mission. In the early 1990s, at the end of the Cold War, he said many in government questioned the further purpose of the national labs. And, he emphasized, the post-Cold War reassessment of that mission is not yet complete, but is, he believes, nearing its end.

"The labs' greatest strength in supporting national security is in their wide array of talents, and putting them together in a systems approach to decreasing the U.S. civil, as well as the traditional military, vulnerabilities. Our civil systems are now all too clearly vulnerable, with vast scientific application necessary."

In this era of unprecedented pace of change, Marburger said that some have suggested "a new Manhattan project," something totally new and consuming. "Scientists remember a time when governmental decisions were made quickly, and everyone listened to the physicists," he said.

However, Marburger asserted that a new Manhattan Project is not appropriate today. The

DOE labs already have critical competencies being applied to the needs of the current war. "Important things are happening in science and the internal world of DOE."

In the coming years, Marburger predicted the scientific community will see significant funding for issues related to climate change.

"By the end of this century, the world must be in a zero-carbon-emission economy. It will look very different from the current economy. Fusion could be a crucial part of the zero-carbon-emission economy of the future, and is a priority for DOE funding." In the current budget proposal, it received more than the standard 2 percent increase for most governmental agencies.

The U.S. is currently the world leader in science, especially in information technology and manipulating matter on the atomic scale, said Marburger, and the Bush budget does favor research in computation and nanotechnology, with "substantial new funding for science."

"It would be foolish to turn aside now while we engage the monster of terrorism. Science has its own intrinsic imperative and this nation will continue to pursue it," Marburger assured Lab scientists, engineers and staff.

Another major Bush priority is medical and public health research, and the president is fulfilling a campaign commitment in this year's budget by increasing the National Institutes of Health (NIH) budget by \$3.9 billion. The national labs can expect to see NIH money funneled into their biotechnology programs, and Marburger believes it is likely to increase in the coming years.

Marburger said that massive computing power and powerful instrumentation are key elements in so many areas of emerging quality-of-life-enhancing science, and recognized that these have been substantially created or advanced at the national labs.

However, he also said the president is aware of a growing competency in these areas outside the national labs. In an increasingly competitive environment, the Bush administra-

tion also looks toward the private sector and commercial marketplace to satisfy even national security needs.

"This president also insists on good management," Marburger stated. The president's management agenda includes performance management standards for national science. Marburger says he is working closely with the Office of Management and Budget in development of these standards to make them workable for both applied and basic science.

"The president and his advisers are not scientists," said Marburger, "but they understand how important science is, while still making sure the American people get the most for their money."



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